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THE ASSIMILATION OF COURSES OF
STUDY FOR BOYS AND GIRLS.¹

MRS. FAWCETT has lately said that it had been reserved for the nineteenth century to discover that a woman was a human being. This is indeed a somewhat epigrammatic statement; but it expresses a fact which, in education as in other matters, has been too frequently overlooked. Boys and girls—for with them at present we have to deal—are both human beings, and as such have far more points of likeness than of difference, and possess many faculties in common. This sounds a truism; but nevertheless, in spite of this obvious fact, education in earlier days was conducted on the principle that boys had one set of powers, needing certain studies, and girls another set, needing quite other subjects in their school-work; and that, for instance, boys should learn Latin, while for their sisters there was, so to speak, the softer feminine of the Roman speech, Italian. This theory is somewhat as if, for physical development, boys were to be fed always on beef and mutton, and girls on ices and sugar candy. The common sense of mankind, however, overlooking the manifest physical difference as irrelevant in the matter of nutrition, has always considered that boys and girls need the same kind of bodily food, at all events; and in the present day, when the laws of health are more widely known, we all agree that these apply equally to both sexes, who alike need, for perfect growth, fresh air, cold water, and exercise. When, however, mental training and mental food are considered, a different opinion obtains, or, rather, has obtained. This is the more remarkable, for there is in this case no proved or manifest difference psychologically, and the scientific study of the mind has not given any reason to suppose that any such difference does exist. The error has arisen, perhaps, from an imperfect ideal of what education ought to be. If it is merely a sort of technical training for the practical work of adult life, then, obviously, as men and women will in general occupy different spheres of work, boys and girls should study different subjects,—boys, let us say, arithmetic, physics, geography, etc.; and girls, needlework, music, and household management. This narrow ideal of education has, we hope, few adherents among teachers. They recognize a noble end,—that of training all faculties of our nature to their highest degree, and of producing, not an engineer or an accountant, a nurse or a dressmaker, but a fully developed human being, with all powers so cultivated as to be able to act and to enjoy, to

labor and endure,—in a word, to live,—as completely and perfectly as the allotted place given to the individual, man or woman, may permit. It would therefore seem to follow that any study which has been marked out for boys because of its value as training, would be equally valuable for girls, as the intellectual powers are common to both sexes, and there is no *prima facie* evidence that the mind is male or female, but rather a presumption in the other direction. Now, classics and mathematics have in modern times justified their place in the curriculum of our boys' schools by their value as training, either of the reasoning powers or the literary taste. Whether they, exclusively, induce such effects, is a question to which we shall return later. Granting that they do, they should be taught equally to boys and girls, and the ideal curriculum should be in most points the same.

Having discussed the theoretical considerations, we may now proceed to examine practical results, and see whether these bear out our theory. The first fact to be mentioned, and perhaps the most convincing, is, that an examiner of considerable experience has informed us that he does not notice any differences in papers submitted to him (which he, of course, knows only by their numbers) from which he can form any opinion as to the sex of the writer. The reports of the Cambridge local examiners, in which the work of boys and girls is separately mentioned, afford no definite evidence of any difference. We remember one report on English composition which did show such, but not at all what the average reader would expect. The girls' work showed much more accuracy and careful thought, and far less absolute nonsense; but the boys showed greater imagination. Again, boys and girls are prepared for the Matriculation examination of the University of London, and pass it equally well: we imagine, indeed, that the percentage of passes for girls is considerably higher. Whatever the positive meaning of this may be, it negatively confirms the theory. The results of the degree examinations are too well known to need remark. Other data come to us from Cambridge. It would have been said fifteen years ago, from those imagined inclinations of the feminine mind to the softer studies, that the mathematical tripos would have been the last to attract many of the students of Girton or Newnham. The facts are exactly opposed to this forecast. Up to the year 1882, a greater proportion of Girton students entered for the mathematical tripos than for any other; and, further, pupil after pupil from one of our girls' public schools went up to Cambridge to study mathematics; so much so, that it was found necessary to warn those who

¹ From *Educational times*, November, 1886.

intended to make teaching their profession, that the supply of women mathematical teachers would exceed the demand, and advise them to take up other branches. The reason was, doubtless, that in mathematics it was easier to make up for the lack of early training than in classics; and from the same cause many, especially those who went up in later life, took moral science. Now, when the movement is older, and girls are trained for Girton, as boys for Trinity or Balliol, classics has been, since 1882, the favorite subject, as far as numbers are concerned.

A teacher who has had considerable experience with girls, and some practice in teaching boys and men, may be forgiven, perhaps, for adding a few generalizations drawn from personal knowledge. It is perfectly possible to teach girls Latin and mathematics, and even to create enthusiasm for the study. On the other hand, some girls are careless over Latin, and hate mathematics; but this is due to the 'old Adam' of laziness, and could be matched, we imagine, in boys' schools. It is almost impossible to teach geometry or algebra to some girls; but there are men and boys with whom the same difficulty occurs. The writer has met with such, and so probably have most teachers; while history gives us no less eminent an example than Lord Macaulay. We have never come across a girl who absolutely could not do Latin, though we know many who do it badly. We also have read classics with a very good mathematical man whose *Little-Go* was a burden scarcely to be lifted, and have heard college fellows express a similar opinion about their own undergraduate days. Again: we have found that to teach an older man mathematics is very much easier than to teach a woman who begins at the corresponding age; but this we believe comes from the fact that the life-work of the man had been concerned in commerce, with numbers and measurement, while the woman probably never did any harder thinking than the ordering of a dinner or the planning of a gown. However, in all such cases there is a danger of forming inductions from few data, and individual experience can have only a value when strengthened by other evidence. Whether women, indeed, will ever do as well as men in the higher subjects of a university course, is a matter on which we have our doubts; but it is, at any rate, irrelevant to the case in point. Here we feel assured that our experience will coincide with that of most teachers and examiners, to the effect that the teaching, and the results of teaching, classics and mathematics, are — other things, as to time, teaching power, etc., being equal — very much the same for boys and for girls, whatever they may be for

men and women. Having laid down, then, the general principle of identity of subjects, it remains to be seen what the subjects should be. And here, when a reform such as that of the scheme of the First-class college of preceptors' examination is proposed, such a question is of the gravest importance, on general grounds, for boys as well as for girls.

The key of the whole position is the discussion as to the exclusive advantages of classics as training. And here we should earnestly deprecate the assimilation of the scheme for girls to the *present* scheme for boys, because we firmly believe that the girls' curriculum in our public and higher-class private schools is nearer the ideal than that for their brothers. To argue the question would be merely to re-write Herbert Spencer's book on education. But the reform of boys' education, and the removal of that incubus of classical study which, as a heritage from earlier days, weighs so heavily on us now, is so important a question, that, like the 'Delenda est Carthago,' it needs naming again and again. When so many studies, far more useful both to men and to women in practical life, all but cry aloud for a fuller share of our limited school-time, we must be very certain of the superiority of classics as training, to keep it in the place of learning which would help our boys to appreciate more fully their own beautiful language and the works of nature around them, and — no unimportant thing nowadays — to maintain in their manhood that supremacy in arts, manufactures, and commerce, which our country now sees endangered on every side. And, indeed, as Herbert Spencer shows, the training of reason and observation is furnished by those very subjects which are most useful, for nature is economical of power. We therefore hail gladly the proposed alteration in the regulations of the First-class examination; for, while maintaining the identity of subjects and standard for boys and girls, it nevertheless allows for that more modern education to which the tendency of the age is rapidly bringing us. Not long ago at Cambridge a determined effort was made to oust Greek as a compulsory subject from the Previous examination, or *Little-Go*; and in the late revision of the regulations for the Matriculation examination at London university there was an equally earnest attempt to make permissive a choice of languages, and thus not necessitate Latin. For both these, the ancient superstition was too strong; but the time of success is, we may hope, not far distant. When Oxford, much to the disgust of some of her older professors, has spent thousands on schools for natural science; when Cambridge has allowed

modern languages for the additional, and has actually founded a modern and mediæval languages tripos, — the younger universities and colleges will surely follow. To make Latin compulsory, therefore, is, from this point of view, distinctly inimical to educational progress, and is therefore unworthy of an institution which, like the College of preceptors, has in past years done so much to further the modern reforms in middle-class education.

SARA A. BURSTALL, B.A. Lond.

A SURVIVAL OF THE UNFITTEST.

IN his inaugural address before the sanitary congress recently held at York, Sir T. Spencer Wells, the president of the congress, touched upon a subject of great interest to educators. He said, speaking as a sanitarian, that so far as concerns the mental and physical training of children, and giving women the option of other occupations than those of domestic life, he saw no great cause for alarm. It is an age in which education — at any rate, for the middle classes — must be pushed far beyond the limits which our fathers thought wide enough for us. Mere rule-of-thumb work is almost out of date; and there are so many industries in which scientific knowledge and exactness are requisite, that the want of early education cuts off a young man's chances of advancement. A workman must now be something more than a mere machine. He must have head as well as hands, brain as well as muscle; and, as uneducated brains are not worth more in the labor-market than untrained muscle, we must be content to make some sacrifice in their culture. As for the outcry about the dangers of women taking up men's work, it is breath wasted. A great many failures will outweigh the few successes, and bring the balance right.

"For my own part," continued the speaker, "I think women capable of a great deal more than they have been accustomed to do in times past. If overwork sometimes leads to disease, it is morally more wholesome to work into it than to lounge into it. And if some medical practitioners have observed cases where mental overstrain has led to disease of mind or body, I cannot deny that I also have at long intervals seen some such cases. But for every such example I feel quite sure that I have seen at least twenty where evils equally to be deplored are caused in young women by want of mental occupation, by deficient exercise, too luxurious living, and too much amusement or excitement.

"Again: we have heard much of late about overpressure from work in schools. This is one

of the novelties of our time. No doubt it exists, and I think it may in part be traced to some of our sanitary success. We have reduced the mortality of early infancy. Many children who would formerly have died off-hand, are now saved, and find their way into the schools. They are survivals of the least fitted. They live, but they are not strong. They have to submit to the same routine, and be forced up, if possible, to the same standard as the rest. But the effort is too much for them. Their frames are not hardy enough to resist the mental strain. They show all sorts of nervous symptoms, disappoint the teachers, and are the types brought forward as victims of the system.

"The vice of the system is that it is indiscriminate. There is no revision of the recruits, and the tasks are not apportioned to the feeble powers of sanitary survivors. This is an evil which will remedy itself in time by the growing-up of a larger proportion of strong children; and the present difficulty may be got over by a little patience and moderation, — a little more regard to sanitary logic. The children must have training before education, and must be put upon something even less than a half-time system."

THE POSITION OF SCIENCE IN COLONIAL EDUCATION.

AT the recent colonial and Indian exhibition, held in London, considerable attention was given to the condition of education in the colonies. At a conference held on this subject, William Lant Carpenter, B.A., B.Sc., whose scientific work is as well known in this country as it is in England, read a most interesting and valuable paper on the position of science in colonial education. Mr. Carpenter's paper is of such value that we reprint the major part of it from the *London Journal of education*. Mr. Carpenter said: —

The colonies to which your secretary desired me to confine my attention were, Canada generally; South Africa (the Cape of Good Hope and Natal); West and South Australia, Victoria, New South Wales, and Queensland; New Zealand and Tasmania, the last of which is unfortunately not represented at this exhibition.

If the term 'education' be used to include, not merely scholastic and collegiate training, but also any organizations and methods for drawing out the minds and faculties of the people, then a review of the position of science in colonial education should include all provisions for teaching it in any degree or form, Science in primary, secondary, and high schools of whatever kind, in technological schools with a view to its applica-